service.[282] Under the NCS proposal, cellular carriers would be permitted to charge for the service, determine the amount of spectrum available to CPAS, and discontinue the CPAS service offering at any time.[283]

177. NCS identifies NSEP personnel at Federal, State, and local levels as potential users of CPAS,[284] and also refers to the role of the Executive Office of the President (EOP) and other Federal agencies, along with representatives from State governments and industry, in developing and supporting the CPAS proposal.[285] The Federal interests, as addressed by NCS, stem from its mandate to assist the Office of Science and Technology Policy (OSTP) in its responsibility for directing the exercise of the war powers of the President.[286] NCS further asserts that, after establishment of a Federal Wireless Users Forum (FWUF), consisting of representatives from Government who seek to work with industry in addressing the requirements of Federal wireless users, and establishment of a Federal Wireless Policy Committee, the need for priority access to limited cellular spectrum in times of heavy demand was quickly identified as a critical requirement of NSEP telecommunications.[287]

178. NCS states that if the Director of OSTP (which is responsible for establishing priority access for Federal users) and the Commission were to establish incompatible priority systems, NSEP communications service users would have to change systems under conditions when compatibility is most important.[288] Further, in support of its CPAS proposal, NCS contends that it is important to have a priority access system that is compatible with the Telecommunications Service Priority (TSP) rules[289] with regard to provisioning and restoration priority of services and network elements by common carriers.[290]

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[282] NCS Petition at ii, 11.

[283] *Id.* at 11 n.8, 12 & App. B.

[284] *Id.* at ii.

[285] *Id.* at 2-3, 8-10.

[286] *Id.* at 7.

[287] NCS Petition at 8-9. FWUF is chaired by the Office of the Manager, National Communications System (OMNCS).

[288] NCS Petition at 7.

[289] *See* Part 64, Appendix A of the Commission's Rules. 47 C.F.R. Part 64, App. A. NCS is also the current administrator for the TSP System under these rules.

[290] NCS Petition at 3, 8, 11 n.8, 12-13.

179. NCS also submits that the proposed CPAS rules would be consistent with the priority access rules that EOP will adopt concurrently for situations in which the President invokes war emergency powers pursuant to Section 706 of the Communications Act.[291] For implementation of CPAS, NCS submits that Priority Access Channel Assignment (PACA) technology, a cellular features description,[292]should be used.[293] Under the PACA queuing scheme, as proposed by NCS, there would be five levels of priority.[294] CPAS calls would not preempt calls in progress.[295]

180. NCS proposes that State and local emergency providers would have the same priority level as Federal defense and law enforcement agencies, because State and local emergency response personnel will likely be first on the scene of emergencies.[296] With regard to State interests, NCS expresses concern over State initiatives to establish their own CPAS rules.[297] NCS urges a uniform, nationwide cellular priority access scheme for effective implementation of CPAS.[298] The rules advocated by NCS would (1) authorize cellular service providers to provide priority access; (2) ensure that such providers, when doing so, are not in violation of Communications Act provisions barring unreasonable discrimination or undue preference; and (3) override any existing contractual provisions inconsistent with the rules adopted.[299]

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[291] *Id.* at 2-3. *See* 47 U.S.C. § 606.

[292] Features Description IS-53. PACA allows a subscriber to have priority access to a channel on call origination. The PACA feature permits the subscriber to obtain priority access to voice or traffic channels by queuing the originating calls of subscribers when channels are not available. Under the NCS proposal, an authorized user with an assigned priority level activates the feature on a per call basis by dialing a feature code such as "*xx." When a channel becomes available, a subscriber in the queue is served on a first come, first served basis and a priority basis, according to the level of priority assigned. *See* CTIA Comments, Attach. A; NCS Petition at 5, 11, 13-14, App. B at 3.

[293] For a further discussion of PACA, see paras. 214-217, *infra.*

[294] NCS Petition at 13-14 & App. B.

[295] *Id.* at 11 & App. B.

[296] *Id.* at 10, 13 & App. B.

[297] *Id.* at 7-8.

[298] *Id.* at i, 7-8.

[299] *Id.* at 2.

2. PSWAC Final Report

181. The *PSWAC Final Report* also addresses the role of commercial services in supporting public safety communications.[300] Among its recommendations, PSWAC states that "[t]he use of commercial services and private contracts should be facilitated, provided the essential requirements for coverage, priority access and system restoration, security, and reliability are met."[301] The PSWAC Steering Committee further finds that, for commercial systems to be available as a reasonable alternative to spectrum dedicated for public safety communications, one of the requirements is priority access to wireless communications channels during peak periods of traffic congestion in emergency and disaster circumstances.[302] The PSWAC ISC also identifies the lack of priority access as a limitation of current commercial systems and as presenting an obstacle to interoperability.[303] PSWAC asserts that among the operational requirements of public safety users necessary for these users to meet their "mission critical" obligations, are "dedicated capacity and/or priority access available at all times (and in sufficient amounts) to handle unexpected emergencies . . . ."[304]

182. The PSWAC ISC states that, although commercial systems could be used to achieve interoperability, they currently do not meet the requirements addressed in the *PSWAC Final Report*.[305] Although the PSWAC ISC recommends that the Commission should adopt rules to make commercial systems more responsive to public safety needs, including a requirement to offer a priority access option, it contends that there are many shortcomings to the NCS CPAS proposal. For example, the PSWAC ISC finds that most users agree that the recommendations made by NCS regarding CPAS do not go far enough to satisfy public safety communications needs.[306] Moreover, in identifying lack of priority access as one of the current disadvantages of commercial services, the PSWAC ISC concludes that those shortcomings flow from market forces and are not readily susceptible to regulatory cures.[307]

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[300] *See PSWAC Final Report* at 4, 21, 25-26.

[301] *Id.* at 4.

[302] *Id.* at 25.

[303] *Id.* at 51. Other limitations of commercial systems identified by the PSWAC ISC are their reliability and command and control characteristics. *Id.*

[304] *Id.* at 14. *See* para. 30 & note 31, *supra*.

[305] *PSWAC Final Report* at 51.

[306] *Id.* at 317.

[307] *Id.*

183. Further, the PSWAC ISC asserts that commercial priority access compliance loses significance if the commercial network fails to meet reliability criteria. Lack of redundancy can produce weak links even if traffic is carried on a "first-in, first-out" basis.[308] Concerning other constraints of priority access, the PSWAC ISC finds that with cellular systems based on Advanced Mobile Phone Service (AMPS), cellular units can be programmed through the handset of the phone. As a result, subscribers not authorized for priority access can program their handsets to the higher priority values. A feature code approach to provide access to a system of priority levels (such as that in the CPAS arrangements proposed by NCS) would be similarly vulnerable to compromise, and thus there is limited assurance that only authorized agencies would obtain priority access.[309]

184. Finally, the PSWAC ISC recognizes that public safety organizations will need to establish procedures for the use of commercial systems that are being designed to provide several levels of priority access. This situation, the PSWAC ISC submits, emphasizes a need for a national focus on operational procedures, standards for systems, training, and interoperability.[310] With the foregoing shortcomings, the PSWAC ISC views CPAS as a possible vehicle to serve the communications needs of the public safety community, and priority access as one component to be considered in the overall network availability to deliver information.[311]

C. Discussion of NCS Proposed Rules and Related Issues

1. Priority Access and Public Safety Communications Generally

185. A number of parties generally support the CPAS proposal advanced by NCS,[312] and we believe, based upon the NCS Petition and the record, that this is an appropriate time to commence our more formal consideration of priority access issues. We are cognizant,

[308] *Id.* at 475.

[309] *See id.* at 478 (quoting materials filed by CTIA). *See also* note 292, *supra*, and para. 220, *infra.*

[310] *PSWAC Final Report* at 475.

[311] *Id.* at 317, 474.

[312] *See, e.g.*, AT&T Comments at 1-2; Bellcore Comments at 2-3; GTEM Comments at 1; NASTD Comments at 3-5; FDMS Comments at 1; LA County Sheriff Comments at 2-3; Oregon Comments at 1; TEMA Comments at 1; WSEM Comments at 1-4.

however, of the fact that NCS[313] and some commenters[314] have questioned whether our consideration of these issues should be undertaken in the context of this broader public safety communications rulemaking proceeding.

186. We conclude that it is advisable to consider the issues raised by the NCS Petition in the context of this proceeding and we therefore seek comment on those issues. In our view, based in part on the conclusions of the *PSWAC Final Report*, there may be a substantial nexus between considerations of priority access and the needs of the public safety community. For example, we may need to consider whether an increased allocation of spectrum for public safety communications and the choices made regarding utilization of this spectrum would have any impact on the need for, or the components of, a priority access system for commercial spectrum. Further, the extent to which interoperability arrangements, established pursuant to this rulemaking, are effective in accommodating public safety communications needs in emergency situations could also have a bearing on our evaluation of the need for priority access systems.

187. Moreover, although there was comment, in response to the *CPAS Public Notice*, that the various issues of the public safety rulemaking would delay consideration of the NCS CPAS proposal, we are in this Notice beginning an expeditious process to consider a range of issues regarding public safety communications. The need for expedition regarding disposition of these public safety issues[315] mitigates any concern that linking our consideration of these issues with our assessment of the NCS priority access proposal will delay resolution of the issues raised by the NCS Petition.

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[313] NCS points out that its CPAS proposal, focussing on emergency response, is much narrower in scope than the *Public Safety Notice*, and CPAS implementation does not depend on the analysis of issues presented in the public safety proceeding. NCS Comments at 2-3, 5. Moreover, NCS contends, although the issues posed by the *Public Safety Notice* are not going to be resolved by the Commission in the near future, action on CPAS is necessary to ensure a nationwide, uniform system prior to action by the States, some of which are seeking their own legislation. *Id.* at 5.

[314] APCO and others are concerned about continuing to include CPAS in the WT Docket 96-86 rulemaking. *See* APCO Comments at 4-5; NASTD Comments at 2; UTC Comments at 4 n.5; LA County Sheriff Comments at 3-5; Bellcore Comments at 2-3; GTEM Comments at 3. *But see* SBMS Comments at 2. APCO submits that, in contrast to the goal of the public safety proceeding to examine future public safety radio spectrum needs through the year 2010, the NCS Petition addresses specific procedures for occasional instances for disaster relief operations where Federal, State, and local government officials must gain priority access to cellular systems, and CPAS is unrelated to those public safety spectrum needs. APCO Comments at 5.

[315] Congress has recently imposed deadlines for the Commission to set aside and license additional spectrum for both public safety and commercial services. *See* Sections 337(a) and 337(b) of the Communications Act, 47 U.S.C. §§ 337(a), 337(b), as added by the Balanced Budget Act of 1997, § 3004.

188. Based on the NCS Petition and the record thus far established, we are seeking further comment regarding whether enabling carriers to offer priority access on a voluntary basis may play a productive role in enhancing the communications tools available to safety and rescue personnel in emergencies. We specifically ask commenters to address the NCS contention that, although the public safety rulemaking might ultimately mitigate the need for priority access, there could be no harm in having rules to address the current situation.[316] We will also examine a related issue[317] regarding whether, as a general proposition, voluntary CMRS offerings of priority access service in emergency or disaster situations should be presumed to comply with the requirements of Section 202 of the Communications Act.[318]

189. We also believe that the record developed thus far regarding the NCS Petition does not furnish us with an adequate basis at this time for making more comprehensive proposals on issues relating to priority access. In our view, more comment is required to consider various issues relating to priority access. These include the following, which are discussed in the following sections: the priority levels for priority access; the spectrum capacity of commercial carriers and its relationship to the need for priority access; costs that wireless carriers may face in developing and offering priority access services;[319] the existence of technical limitations on priority access, and related technical issues; and the question of the classes of carriers to which priority access should apply. Based on the comments we receive with respect to these and other related issues, we will determine how to proceed further in establishing priority access rules.

2. Priority Levels

190. We recognize the significant effort of Federal entities and other groups in the long-term planning for priority access. This effort becomes particularly noteworthy in the context of the findings of the *PSWAC Final Report*.[320] The record indicates that PACA, and related technology necessary to implement it, is not capable of being applied in the current

[316] NCS Reply Comments at 4.

[317] *See* paras. 196-207, *infra.*

[318] 47 U.S.C. § 202.

[319] *See* para. 211, *infra.*

[320] *See* paras. 181-184, *supra.*

marketplace.[321] Estimates for the resolution of problems concerning the implementation of priority access appear indefinite. Consequently, we find that it is premature to propose in this Notice specific levels for priority based on the NCS proposal. We seek more comment in this section on the issue of priority levels that should be included in priority access.

191. We believe that in the context of issues and problems raised in this Notice, there are significant questions regarding how a priority access structure can best be formulated and applied. In this respect, we seek comment on how we should examine and resolve this issue. Interested parties may comment, for example, on whether it is better to require a formal prioritization structure or whether a less formal, more flexible approach should evolve. The latter approach might consist of various offerings of priority access based on conforming to a general, and ubiquitously applied, set of governing principles that would allow greater flexibility as priority access develops. In terms of what is the most effective means to allow and encourage the marketplace to respond to the kinds of demand for this service offering, we seek comment regarding whether the Commission should prescribe rules for priority levels, rely on industry and governmental agency groups to establish uniformly applied priority levels, or leave to carriers the decision to offer individual or customized priority levels, consistent with a single set of principles and criteria, to the subscribers who demand priority access.

192. We also seek further comment on what priority access structure or structures would be most suitable to the commercial wireless environment as it continues to develop. Commenters should address what scheme of priority levels would provide the optimal service to meet the needs of NSEP users and associated public safety personnel while not interfering with the needs of citizens in emergencies. We also seek comment on what role should be played by commercial wireless providers, manufacturers of the equipment required, regional planning committees, Public Safety Answering Point (PSAP) personnel, trade associations, standard setting bodies such as the Telecommunications Industry Association (TIA), and other potential participants in going forward in the development of priority access.

3. Spectrum Capacity of Commercial Carrier Networks

193. A number of parties contend that one of the key considerations supporting the need for priority access arrangements is the current lack of sufficient capacity in the commercial wireless network.[322] With a shortage of capacity, the flooding of the network by

[321] *See* BellSouth Comments at 2-6; CTIA Comments at 5-6; GTEM Comments at 1, 4 n.4. *Compare* NCS Reply Comments at 2-3 *with* DISA Letter, Mar. 14, 1997 (concerning deployment of handsets required and adoption of necessary standards). See the discussion in paras. 212-219, *infra*.

[322] *See* NCS Petition at 4; Bellcore Comments at 2; GTEM Comments at 2; Oregon Comments at 1.

a high incidence of attempted calls in emergency or disaster situations could lead to increased blocking of a portion of those calls. Consequently, factors that affect capacity are also likely to affect the ability and incentive of commercial wireless service providers to furnish priority access services, as well as the need of the public safety community to obtain and utilize such services.

194. The amount of spectrum available for dedicated public safety communications uses is being substantially increased by the availability of 24 megahertz of spectrum in the 746-806 MHz band. One question in examining the NCS proposal is whether this increased spectrum for public safety communications lessens the need for priority access arrangements regardless of the status of capacity on commercial wireless networks. Commenters disagree over whether such additional spectrum will obviate the need for CPAS.[323] Thus, we seek comment regarding the relationship between the availability of this new public safety spectrum and the need for priority access arrangements.

195. Finally, we seek comment regarding whether other recent developments in the utilization of spectrum for public safety communications may diminish the need for priority access services. For example, public safety users continue to develop and upgrade their own wireless systems. State agencies are upgrading their own 800 MHz band systems to provide more capability and interoperability.[324] In addition, some public safety agencies are pursuing the development of "shared systems" utilizing wide-area SMR service.[325] Further, some commercial wireless providers are currently able to add mobile communications capacity by transporting trailers, carrying supplemental communications centers, to disaster sites to assist public safety personnel.[326]

4. Liability under Section 202 of Communications Act

a. Adequacy of Current Provisions

196. NCS asserts that in preliminary discussions with service providers regarding its proposed CPAS rules, several carriers raised the issue of potential liability arising from

[323] *See* BANM Comments at 2-3; BellSouth Comments at 8. *Cf.* NCS Reply Comments at 2, 4. *See generally* NASTD Comments at 5-6.

[324] *See* S. Galatowitsch, *My Oh My Ohio*, Wireless Week, SMR and Private Radio Product Supplement, Apr. 28, 1997; *FWUF Workshop* at 54-55 (concerning upgrade by the State of Michigan).

[325] *See FWUF Workshop* at 52-53 (concerning FEDSMR service); *PSWAC Final Report* at 3.

[326] *See* R. Risch, *Flood-Relief Efforts Continue*, Wireless Week, May 5, 1997.

providing priority access.[327] Section 202(a) of the Communications Act makes it unlawful for any common carrier to engage in any unreasonable discrimination or preference in connection with the provision of communications services.[328] NCS has expressed its view that the Commission has already adequately addressed, in connection with our adoption of TSP rules in a previous Order, the issue of liability in circumstances like those posed by priority access offerings.[329]

197. Several commenters disagree with NCS, arguing that the Commission should explicitly state that offering CPAS will not result in any liability under Section 202.[330] These commenters believe that uncertainty over potential liability would discourage carriers from voluntarily providing a CPAS service.[331] GTEM adds that the Commission should make an affirmative finding that compliance with any CPAS rules is an absolute defense to any liability question arising from provision of a CPAS offering.[332]

198. In adopting the TSP rules, we declined to include any explicit provisions limiting carrier liability. We found that "[t]he essential purpose of TSP is to provide standards that permit carriers responding to NSEP provisioning and restoration priority requests to act lawfully and avoid violation of the proscription of 47 U.S.C. § 202 . . . ."[333] The standards established in the TSP rules provided the basis for our determination that the TSP rules, "without a specific, additional provision," offer the liability protection that carriers sought because any claimant asserting unreasonable discrimination or preference has a heavy burden to show that the carrier had violated Section 202 of the Act.[334]

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[327] NCS Petition at 10.

[328] 47 U.S.C. § 202(a).

[329] NCS Petition at 10, citing National Security Emergency Preparedness Telecommunications Priority System, GN Docket No. 87-505, Report and Order, 3 FCC Rcd 6650, 6658 (para. 45) (1988) (*TSP Report and Order*) (NCS construes the Commission conclusion regarding limitation of liability as shielding a service provider from liability as long as that provider was acting in accordance with the Commission's Rules).

[330] BellSouth Comments at 9-10; SBMS Comments at 5; Vanguard Comments at 7.

[331] BellSouth Comments at 9-10; SBMS Comments at 5.

[332] GTEM Comments at 5-6.

[333] *TSP Report and Order*, 3 FCC Rcd at 6658 (para. 45). The Commission stated that presumably, in response to a claimant, a carrier would respond that it had acted under the authority of the TSP rules, and then, the burden of proof would shift to the claimant to show non-compliance. *Id.*

[334] *See id.*

199. BellSouth observes that "[t]he . . . TSP rules *require* priority treatment and, thus, the Commission found that a claimant asserting a violation of Section 202 must show that a carrier violated the TSP rules in order to prevail."[335] On the other hand, asserts BellSouth, the proposed CPAS rules are *voluntary*, and, therefore, to ensure insulation of carriers who provide CPAS from liability, the Commission should make clear that the carriers who elect to implement CPAS will not incur liability.[336]

b. Proposed Rules

200. We tentatively agree with BellSouth that, to the extent the provision of priority access service is a voluntary offering made by a carrier and to the extent we refrain from establishing detailed rules regarding various levels of priority access, it would be prudent for the Commission to provide specifically for limitations on liability under Section 202. Thus, we propose that it will be sufficient for a CMRS provider, in responding to any complaint alleging an unreasonable discrimination or undue preference under Section 202 of the Communications Act, to demonstrate that the service provided by the carrier is exclusively designed to enable authorized priority users, in emergency situations when spectrum used by the carrier is congested, to gain access to the next available channel on the service network of the carrier, before subscribers not engaged in public safety or NSEP functions. Such a demonstration would shift the burden of proof to the complainant. We seek comment on this proposal.

201. Further, we tentatively conclude that the types of priority access services that will qualify for limitation of liability under Section 202 should be limited to CMRS services providing priority access to NSEP personnel, including Federal Government entities, in addition to State and local governmental entities performing public safety functions. Thus, we also tentatively conclude that priority access services provided by commercial carriers to corporate or other business or private subscribers on a private contractual basis would not constitute the type of priority access service that would qualify for any limitation of liability under Section 202. We tentatively conclude that this approach is consistent with the objective to serve the national defense and to meet the needs of public safety entities to improve their ability to respond to emergencies and disasters. We seek comment on these tentative conclusions.

202. We also seek comment regarding types of actions and conduct by carriers, in providing priority access service to authorized priority users, that would qualify for limitation of liability under Section 202 of the Communications Act, as proposed in this Notice. For

[335] BellSouth Comments at 9 (emphasis in original).

[336] *Id.* at 9-10.

example, we seek comment regarding whether it should be permissible for carriers to allocate a fixed number of channels for priority access.[337] Another example involves whether carriers, in providing priority access service, should be permitted to include the capability to preempt non-NSEP calls in progress that are excessive in duration.[338]

c. Exercise of Forbearance Authority

203. In the previous section we have proposed to establish limitations of liability under Section 202 of the Communications Act by providing carriers with the opportunity to shift the burden of proof in the case of claims of unreasonable discrimination or undue preference. We also seek comment, however, on alternative measures that we could employ to ensure providers of priority access that they are excluded from potential liability under Section 202. Such measures might include, for example, the exercise of our forbearance authority under Section 10 of the Communications Act.

204. At the time NCS filed its Petition, Congress had not yet enacted the Telecommunications Act of 1996.[339] The 1996 Act, in adding Section 10 to the Communications Act, gives the Commission authority to forbear from applying any provision of the Communications Act, including Section 202 and notwithstanding Section 332(c)(1)(A),[340] to a telecommunications service or class of telecommunications services, provided that the Commission makes certain determinations established in the statute.[341]

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[337] NCS proposes that service providers ensure that at all times a reasonable amount of cellular spectrum is made available to the public. NCS Petition at 11 n.8, App. B at 9. *See* AT&T Reply Comments at 6-7.

[338] *See* APCO Comments at 4 n.1; VA State Police Comments at 1 (concerning excessive length of calls by news media tying up cellular channels during emergencies).

[339] Telecommunications Act of 1996 (1996 Act) , Pub. L. No. 104-104, 110 Stat. 56.

[340] The Budget Act of 1993 amended the Communications Act to add Section 332(c)(1)(A). 47 U.S.C. § 332(c)(1)(A). That section, in addressing the regulatory treatment of mobile services, provides that in rendering the provisions of Title II of the Act inapplicable to a CMRS service or person providing it, the Commission may not specify any provision of Section 202. In adopting regulations for CMRS, we codified that statutory limit on our forbearance authority in Section 20.15 of the Commission's Rules. *See* Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, GN Docket No. 93-252, Second Report and Order, 9 FCC Rcd 1411 (1994) (*CMRS Second Report and Order*), *recon. pending* (adopting Section 20.15(a)). Section 20.15(a) provides in pertinent part that CMRS providers, to the extent applicable, must comply with certain specified sections of Title II, including Section 202. *See* 47 C.F.R. § 20.15(a).

[341] *See* Section 10(a) of the Communications Act, 47 U.S.C. § 160(a), as added by the 1996 Act, § 401.

205. Section 10(a) of the Communications Act sets forth three prerequisite determinations for the Commission to make. The statute requires that, before forbearing from applying any section of Title II, we must find that each of the following conditions applies:[342]

(1) Enforcement of such regulation or provision is not necessary in order to ensure that the charges, practices, classifications, or regulations by, for, or in connection with that telecommunications carrier or telecommunications service are just and reasonable and are not unjustly or unreasonably discriminatory;

(2) Enforcement of such regulation or provision is not necessary for the protection of consumers; and

(3) Forbearance from applying such provision or regulation is consistent with the public interest.

206. We seek comment regarding whether it would be appropriate to forbear from applying Section 202(a) of the Communications Act to the extent a carrier offers priority access service to NSEP personnel or to State or local governmental entities performing public safety functions. We also ask for comment on the definition of consumers, what factors we should consider, what problems may arise in making those determinations, and examples of applying these tests in evaluating whether forbearance is appropriate. For example, with regard to Section 10(a)(2), do considerations concerning possible conflict between priority access service and consumers of 911 service raise the question of whether priority access service may harm consumers?[343]

207. Moreover, Section 10(b) of the Communications Act requires weighing competitive effects in determining whether forbearance is consistent with the public interest under Section 10(a)(3). With regard to the requirement of Section 10(b), we ask what the potential competitive effects of commercially provided priority access service would be among CMRS providers, what the relevance of those competitive effects is regarding forbearance, and what the impact of those competitive effects would be on whether priority access is

[342] *See* Sections 10(a)(1) through 10(a)(3) of the Communications Act, 47 U.S.C. § 160(a)(1)-(3), as added by the 1996 Act, § 401.

[343] *See, e.g.*, SBMS Comments at 5 (contending that carriers should be protected against claims by individuals who are not able to complete 911 or other emergency calls due to heavy usage by CPAS authorized users).

voluntary or mandatory.[344] With respect to this issue, we note that the *PSWAC Final Report* concluded that commercially provided services should be provided on a competitive basis.[345]

5. Voluntary or Mandatory Provision of Priority Access

208. The NCS Petition proposes that priority access rules would not be mandatory.[346] Service providers could voluntarily elect to provide priority access, but would then be required to do so pursuant to the provisions of those rules.[347] According to NCS, service providers electing to provide priority access would have to ensure that at all times a reasonable portion of cellular spectrum would be made available for public use.[348] Such providers, however, would have discretion in implementing priority access, including the amount of spectrum assigned and service charges for the offering.[349] The NCS proposal provides for the option to discontinue, but the carrier must provide notice that it is discontinuing the service.[350]

209. Several commenters strongly concur that the provision of priority access service should be voluntary.[351] NENA asserts, however, that the NCS Petition does not discuss why the adoption of emergency call precedence should be at the discretion of cellular carriers who hold radio licenses in the public interest.[352] NENA suggests that if carriers are concerned that implementation of PACA would be too costly to pay for itself commercially, the answer would be to limit the cellular carrier's ability to refuse the requests of customers — especially Federal, State, and local government agencies — who are ready, willing, and able

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[344] *See* Section III.C.5., *infra*, paras. 208-211.

[345] *See PSWAC Final Report* at 4.

[346] NCS Petition at 11.

[347] *Id.* at ii, 11.

[348] *Id.* at 11 n.8. This rule requirement, NCS maintains, is consistent with the Commission's TSP rules. *See also id.*, App. B at 9.

[349] *See* AT&T Reply Comments at 6-7 (referring to NCS Petition); *see* note 283, *supra*, and accompanying text.

[350] NCS Petition, App. B at 9.

[351] CTIA Comments at 3-5; Vanguard Comments at 2; AT&T Reply Comments at 5-6; SBMS Reply Comments at 4.

[352] NENA Comments at 4.

to pay for the PACA handset and network costs, either through service rates or by other funding mechanisms.[353]

210. We seek comment regarding whether CMRS providers should be permitted to provide priority access services on a voluntary basis. As a general matter, we believe it is sound public policy to pursue market solutions to communications needs because, in our view, reliance on market forces ensures that customer demands are met efficiently and quickly through the provision of cost-based services.[354] We ask commenters to address whether, in this case, it is reasonable to expect that competitive forces will prompt CMRS providers to respond to market demand by developing and offering priority access services that meet the needs of Federal, State, and local government agencies.

211. In addition, whether CPAS is voluntary or mandatory may dictate the necessity for cost recovery or funding mechanisms. Under the NCS proposal, the service user, as the "cost-causative user" is to be responsible for the charges of providing the priority access service.[355] Some commenters submit, however, that with mandatory rules a funding mechanism would have to established.[356] NENA observes that if priority access is mandatory, there may have to be considerations of prescribed cost recovery, whereas a voluntary scheme is amenable to each carrier's business judgment as to whether price will cover costs plus a return on investment.[357] In this regard we seek further comment concerning the means of funding that would result in the most effective implementation of priority access. We also

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[353] *Id.* at 4-5.

[354] *Cf., e.g.*, Rulemaking To Amend Parts 1, 2, 21, and 25 of the Commission's Rules To Redesignate the 27.5-29.5 GHz Frequency Band, To Reallocate the 29.5-30.0 GHz Frequency Band, To Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, Petitions for Reconsideration of the Denial of Applications for Waiver of the Commission's Common Carrier Point-to-Point Microwave Radio Service Rules, CC Docket No. 92-297, Suite 12 Group Petition for Pioneer Preference, PP-22, Second Report and Order, Order on Reconsideration, and Fifth Notice of Proposed Rulemaking, FCC 97-82, released Mar. 13, 1997, *recon. pending, appeal pending sub nom.* Melcher v. FCC, Case Nos. 93-110, *et al.* (D.C. Cir., filed Feb. 8, 1993), at para. 157 ("[W]e are of the view that competitive markets are the most direct and reliable means for ensuring that consumers receive the benefits described in the Communications Act . . ."); Implementation of Sections 3(n) and 332 of the Communications Act — Regulatory Treatment of Mobile Services, GN Docket No. 93-252, Second Report and Order, 9 FCC Rcd 1411, 1420 (para. 19) (1994) ("Success in the marketplace . . . should be driven by technological innovation, service quality, competition-based pricing decisions, and responsiveness to consumer needs — and not by strategies in the regulatory arena."), *recon. pending.*

[355] NCS Petition at 12-13, App. B at 8.

[356] *See* AT&T Reply Comments at 6; NENA Reply Comments at 2. *See generally* GTEM Comments at 6.

[357] NENA Reply Comments at 3.

invite comment on whether a flexible, non-prescriptive approach to funding, as we concluded we should apply to the deployment of wireless E911 services, would be advisable in order to allow carriers and government officials the latitude to develop cost recovery solutions that address particular needs for priority access.[358]

6. Potential Limitations of Priority Access Service

212. NCS recognizes current technical constraints in the implementation of CPAS, because the standards for CPAS are still in the developmental stage.[359] Consequently, at the time NCS filed its Petition, no service provider was in a position to provide the priority access that NCS proposed.[360] The record also indicates that, although some progress regarding standards has been made, carriers may still not be in a position to offer an effective form of priority access based on the expressed needs of potential subscribers.

213. We seek comment regarding the potential technical limitations we summarize in this section. In particular, we ask commenters to address the extent of these potential limitations, efforts underway to reduce or overcome the limitations, and the implications of these potential problems for the viability and effectiveness of priority access systems.

a. Technical Standards; Operational Limitations

214. The NCS Petition suggests that priority access should be implemented using a PACA queuing scheme. The record indicates that the standard for the PACA feature, IS-53 A, is applicable only to cellular systems that use a TDMA air interface.[361] BellSouth submits that CPAS is premature due to this limitation and that the standard is not capable of being applied to analog systems.[362] The PACA cellular Features Description has been recently

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[358] *See* Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, Report and Order and Further Notice of Proposed Rulemaking (*E911 Report and Order*), 11 FCC Rcd 18676, 18722 (paras. 89-90) (1996), *recon. pending*. Certain rules adopted by the Commission in the *E911 Report and Order* were subsequently stayed through November 30, 1997. Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, Order, DA 97-2119 (Wireless Telecom. Bur.), released Sept. 30, 1997.

[359] NCS Petition at 4-5.

[360] *Id.*

[361] *See* BellSouth Comments at 2-3.

[362] *Id.*

finalized as an American National Standards Institute (ANSI) standard.[363] Even with this update, however, current analog phones still will not work with the CPAS scheme, because they have a five-second "timeout" feature.[364]

215. In addition, implementation of the PACA standard requires the use of a switch-to-switch protocol, for intersystem interoperability (roaming).[365] Our understanding is that this protocol, IS-41 Rev. C, is final for cellular service and available for broadband PCS, and is currently implemented throughout a substantial part of the wireless industry. The protocol can be used with TDMA-based systems and is available for CDMA systems, although the digital air interface for CDMA is not yet completed.[366] The IS-41 Rev. C protocol, however, is not compatible with all digital systems. Thus, we seek comment regarding the progress of the development of priority access standards for digital cellular systems, and for wireless systems in general.

216. A further potential problem is that, although current protocols may provide intersystem capability for newly initiated calls, there appears to be no capability to provide for roaming between different systems (*i.e.*, when roaming into another area) while there is a pending request in the queue. The pending or "queued" call would be dropped when moving to another system and would have to be re-initiated by the user.[367] We seek comment regarding the significance of this technical issue. In particular, we seek comment regarding whether public safety users intend to use priority access while moving from place to place, or whether they contemplate that priority access will more likely be used at relatively confined emergency scenes.

217. Finally, we note that CPAS, as proposed in the NCS Petition, does not have dispatch capability, and several public safety commenters contend that they cannot wait for a dial tone in emergency situations, and need push-to-talk capability for immediate communications access. We seek comment regarding this issue, and regarding whether priority access will meet the needs of public safety personnel.

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[363] ANSI/TIA/EIA-664. Final establishment occurred after an update to IS-53B. *See* DISA Letter, Mar. 14, 1997; CTIA Comments at 5 & Attach. A; NCS Reply Comments at 2.

[364] DISA Letter, Mar. 14, 1997. According to DISA the "timeout" means that if an analog handset does not get a channel in five seconds, it terminates the connection. *Id.*

[365] CTIA Comments at 5-6; DISA Letter, Mar. 14, 1997.

[366] DISA Letter, Mar. 14, 1997.

[367] *See* NCS Petition at 13; CTIA Comments at 5; *PSWAC Final Report* at 308.

b. Equipment and Hardware Limitations

218. The record indicates that the PACA feature can be installed only in new phones, and thus is not "backward compatible."[368] Therefore, existing digital cellular, PCS, and SMR phones would not allow deployment of a CPAS service. DISA adds that carriers are reluctant to discuss implementation of priority access for analog handsets, due to the industry trend toward digital service for competitive and capacity reasons.[369]

219. Moreover, as DISA submits, the CPAS feature is designed for implementation only by NSEP users who will have to acquire a commercial off-the-shelf or dual-mode handset built in accordance with the digital interface standards necessary to allow "queuing" operation.[370] DISA claims that for the CPAS proposal to work with analog handsets, cellular providers would have to implement the CPAS scheme differently than proposed, or implement two different CPAS schemes.[371] We seek comment regarding these priority access implementation issues.

c. Security Limitations

220. Consideration of the NCS CPAS proposal for NSEP users also entails recognition of the need for secure communications.[372] Lack of security regarding analog-based cellular systems has been considered to be a problem, and digital communications may not be as secure as once thought, even with encryption codes.[373] In light of the fact that most operating cellular systems are still analog, the existing record does not appear to focus adequately on the issue of secure communications in priority access offerings. There is comment that the proposed 3-digit code, "*xx," to acquire access into the queue could be easily tampered with by computer "hackers."[374] We seek comment regarding these security issues.

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[368] CTIA Comments at 5-6; AT&T Reply Comments at 3 & n.7; *see also* DISA Letter, Mar. 14, 1997.

[369] DISA Letter, Mar. 14, 1997.

[370] *Id.*

[371] *Id.*

[372] *PSWAC Final Report* at 478.

[373] *See* C. Carlson, *Beltway Offered Cellular Choice*, Wireless Week, Jan. 27, 1997; E. Warner, *Cellular Encryption Codes Cracked*, Wireless Week, Mar. 24, 1997; R. Lee, *Crackers and Hackers*, Wireless Week, Mar. 31, 1997.

[374] *See* Dixon Comments at 2.

7. Other Issues

a. Types of Commercial Wireless Carriers Offering Priority Access

221. In view of the proposal for additional dedicated spectrum for public safety and increased capacity of existing and new CMRS providers, we tentatively conclude that all CMRS carriers, including cellular carriers, should be considered as potential providers of priority access service. Although the NCS Petition focuses its proposal on priority access for cellular services,[375] NCS also indicates that all wireless services could be considered in its priority access proposal.[376]

222. In further support of broadening the applicability of priority access to CMRS carriers in addition to cellular providers, commenters to the *CPAS Public Notice* take two approaches. First, priority access rules should apply to all CMRS carriers, including broadband PCS and SMR.[377] Second, such rules should apply only to two-way CMRS carriers, including providers of new CMRS services, but excluding air-ground services.[378] GTEM asserts that although most two-way CMRS traffic today is cellular, broadband PCS and enhanced SMR are entering the wireless telecommunications marketplace.[379]

223. The commenters base their positions for the most part on the issue of regulatory parity — that all CMRS providers should be regulated consistently.[380] GTEM notes that Congress adopted a model of regulatory parity for all CMRS in the Omnibus Budget Reconciliation Act of 1993 to ensure that all CMRS providers are subject to the same rules, to the extent practicable.[381] Accordingly, SBMS submits that adopting specific requirements of priority access for cellular carriers would be contrary to the actions by the Commission in implementing the Congressional intent of this legislation, and there should be regulatory symmetry pertaining to priority access.[382] Otherwise, SBMS asserts, requiring cellular carriers

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[375] NCS Petition at 3-4.

[376] NCS Petition at 3 n.3. *See also* DISA Letter, Mar. 14, 1997.

[377] BANM Comments at 4 n.7; CTIA Comments at 4.

[378] GTEM Comments at 4.

[379] *Id.*

[380] BANM Comments at 4 n.7; GTEM Comments at 4-5; SBMS Comments at 3-4.

[381] GTEM Comments at 4-5.

[382] SBMS Comments at 3-4.

that elect to offer priority access to abide by rules and requirements prescribed by the Commission, while allowing other wireless providers the freedom to craft customized solutions without regard to those rules and requirements, would place cellular carriers at a competitive disadvantage.[383]

224. We generally agree with the contentions of these commenters and thus we tentatively conclude that priority access rules should apply to all CMRS providers, including cellular carriers. We seek comment on this tentative conclusion. For example, although priority access could be provided by PCS and SMR carriers in the near term, it may not be technically feasible for carriers with GSM-based systems to offer priority access. Such matters depend on the progress of a standards process in developing a technical standard that would accommodate those systems under a priority access scheme.

225. We also seek comment on whether priority access should be applicable to Mobile Satellite Systems (MSS) that are treated as CMRS under Part 20 of the Commission's Rules.[384] DISA notes that many of the PCS providers and MSS providers have suggested several types of priority systems.[385] Generally in this regard, we also seek comment on whether the applicability of priority access rules to CMRS carriers should parallel the same CMRS services as are subject to E911 requirements. We request comment on whether there is a technical or operational basis to apply priority access to the same CMRS services as those covered by E911 requirements.[386]

226. In addition, NCS proposes in its Petition that priority access service providers would not include resellers and agents, because only licensees can control the software with the capability to offer CPAS.[387] We request that commenters address the role of resellers of CMRS in offering priority access, particularly focussing on the issue of non-discrimination in resale.[388] Finally, we seek comment on whether priority access should be applied in the case

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[383] *Id.* at 1-4.

[384] *See* Sections 20.7(c) and 20.9(a)(10) of the Commission's Rules, 47 C.F.R. §§ 20.7(c), 20.9(a)(10).

[385] *See* DISA Letter, Mar. 14, 1997.

[386] *See E911 Report and Order*, 11 FCC Rcd at 18716-18 (paras. 80-84).

[387] NCS Petition at 11-12.

[388] *See, e.g.*, Section 20.12(b) of the Commission's Rules, 47 C.F.R. § 20.12(b), providing that "[e]ach carrier subject to this section must permit unrestricted resale of its service." This requirement applies to the providers of PCS, cellular, and SMR service specified in Section 20.12(a) of the Commissions Rules. 47 C.F.R. § 20.12(a).

of any newly reallocated spectrum that is made available to CMRS providers who may desire to provide priority access as part of their new service offerings.

b. Administration of Priority Access

227. In view of the scope of our proposal concerning priority access, we do not believe it is necessary at this time to address issues concerning aspects of administering priority access that were raised by the commenters. Those issues include the assignment of priority levels and safeguarding against potential abuses of priority access systems. Another issue we are deferring is who should have or share responsibility in the administration of priority access, *e.g.*, whether administrators of the regional planning committees and Public Safety Answering Points[389] should have a role. While we have decided to defer consideration of these issues, we encourage government entities, public safety agencies, and commercial providers of wireless service to continue to work together to resolve them.

IV. PROTECTION OF TELEVISION SERVICES

A. Background

228. In this section of the Notice, we discuss technical requirements for protecting incumbent broadcast licensees and planned DTV allotments against interference. In the *DTV Proceeding*,[390] we stated that all analog TV and DTV operations in the 746-806 MHz band would be fully protected during the DTV transition period. In the *Allocation Notice*[391] we noted that new licensees in the band will have to protect both analog TV and DTV operations from interference.

229. We note that land mobile and TV stations have successfully shared the 470-512 MHz band (TV Channels 14-20) in 11 major metropolitan areas of the United States.[392] In

[389] *See E911 Report and Order*, 11 FCC Rcd at 18678-79 (paras. 2-3).

[390] *See DTV Sixth Report and Order* at para. 80.

[391] *Allocation Notice* at para. 17.

[392] *See* Section 2.106 of the Commission's Rules, 47 C.F.R. § 2.106, Notes NG66, NG114, and NG127. The 11 urbanized areas where UHF channels may be used for land mobile operations and the channels set aside for such operations in those areas are:

GEOGRAPHIC AREA	TV CHANNEL
New York, N.Y.; Northeastern New Jersey	14, 15
Los Angeles, Cal.	14, 16, 20

the 470-512 MHz band, we permit land mobile base stations or mobile relay stations to be located within 80 kilometers (km) (50 miles) of the geographic center of these cities. We also permit mobile units to operate within 48 km (30 miles) of any base station. We protect TV stations from interference by requiring land mobile licensees to observe a range of specific geographical separation, antenna height, and power limits. Geographical separations between land mobile base stations and protected co-channel TV stations range between 193 km (120 miles) and 260 km (162 miles), depending on the power and height above average terrain of the land mobile base station.[393]

230. These spacing requirements were adopted in 1970 to assure the maintenance of a ratio of at least 50 dB between desired TV signals and undesired co-channel land mobile signals (the D/U signal ratio) at a Grade B contour 55 miles in radius from a protected TV station.[394] We also adopted separations based on a 40 dB D/U signal ratio, which is used currently only for channel 15 frequencies in the New York metropolitan area.[395] The 40 dB ratio reduced the separations to a distance range between 145 km (90 miles) and 209 km (130 miles).[396] For protection of first adjacent channel TV operations, the spacing requirements were based on a D/U signal ratio of 0 dB, and result in geographical separations between 96

GEOGRAPHIC AREA	TV CHANNEL
Chicago, Ill.; Northwestern Indiana	14, 15
Philadelphia, Pa.; New Jersey	19, 20
San Francisco, Cal.; Oakland, Cal.	16, 17
Boston, Mass.	14, 16
Washington, D.C; Maryland; Virginia	17, 18
Pittsburgh, Pa.	14, 18
Miami, Fla.	14
Houston, Tex.	17
Dallas, Tex.	16

[393] *See* Sections 90.307 through 90.309 of the Commission's Rules, 47 C.F.R. §§ 90.307-90.309.

[394] *See* Amendment of Parts 2, 89, 91, and 93, Geographic Reallocation of UHF-TV Channels 14 through 20 to the Land Mobile Radio Services for Use Within the 25 Largest Urbanized Areas of the United States, Docket No. 18261, First Report and Order, 23 F.C.C.2d 325, 342 (para. 44) (1970) (*Geographic Reallocation First Report and Order*). For definitions and measurement provisions for the Grade B contour of TV stations, see Sections 73.683 through 73.684 of the Commission's Rules, 47 C.F.R. §§ 73.683-73.684. *See also* note 400, *infra.*

[395] *Geographic Reallocation First Report and Order*, 23 F.C.C.2d at 342 (para. 44).

[396] *See* Section 90.309 of the Commission's Rules, 47 C.F.R. § 90.309.

km (60 miles) and 108 km (67 miles).[397] We also provided that any land mobile base station with associated mobiles must have a geographic separation of at least 145 km (90 miles) from adjacent channel TV stations.

231. In 1985, the Commission proposed to change the D/U signal ratio from 50 dB to 40 dB for all TV/land mobile sharing. In so doing, we stated that our earlier 50 dB ratio was too conservative, and that the 40 dB ratio would result in minimal impact on co-channel TV service due to additional interference reductions resulting from receiving antenna and polarization discrimination.[398] We also solicited comment on whether we should change the 0 dB D/U signal ratio for adjacent channel TV stations, and on whether new land mobile stations should be allowed to operate inside the Grade B contour of adjacent channel TV stations.[399] This proposal was held in abeyance pending completion of the *DTV Proceeding*.

B. Discussion

1. Protection Criteria

232. We recognize that our previous sharing criteria and analyses were based upon use of "traditional" private land mobile technology that typically employed a high powered base station to provide wide area coverage. We anticipate that public safety users will employ such systems to a significant degree. At this juncture, however, it is not clear what types of services, technologies, or system architectures may be used for new types of public safety services. Accordingly, we believe it is appropriate to consider in this proceeding a variety of approaches and criteria for protecting TV broadcasting from the services that will occupy Channels 60-69.

a. Geographic Spacing Requirements Based on 55-Mile Reference Grade B Contour

233. One approach would be to protect co-channel analog TV stations on channels 60-69 during the DTV transition period by adopting geographical spacing requirements based

[397] *See Geographic Reallocation First Report and Order*, 23 F.C.C.2d at 342 (para. 45).

[398] *See* Amendment of the Rules Concerning Further Sharing of the UHF Television Band by Private Land Mobile Radio Services, GEN Docket No. 85-172, Notice of Proposed Rulemaking, 101 F.C.C.2d 852, 861 (para. 19) (1985) (*UHF-TV Sharing Proceeding*).

[399] *See id.* at 862 (para. 20).

on a 40 dB D/U signal ratio at the 55-mile Grade B contour of the protected TV station.[400] We could protect adjacent channel TV operations by adopting geographical spacing requirements based on a 0 dB D/U signal ratio.[401] This approach would be based on experimental data that resulted in our earlier proposal to lower the D/U signal ratio to 40 dB and our use of this standard to protect TV service from interference in the New York metropolitan area.

234. If we were to adopt this approach, we would favor development of a table permitting operation at distances based on particular powers and antenna heights, similar to that in the current geographic separation standards in Subpart L of Part 90 of the Commission's Rules.[402] We note that separation tables are clear and easily applied, and we tentatively conclude that use of such tables should simplify communications system planning for new licensees, including local government and other public safety entities. Moreover, because the tables would be based on the assumption that TV stations are operating near full facilities,[403] they would also allow some flexibility for broadcasters operating at less than full facilities to modify their facilities during the DTV transition period without raising new interference concerns.

235. The above analysis is based on the protection necessary for analog TV. We recognize, however, that we must also address protection criteria for DTV stations operating on Channels 60-69 during the transition period. DTV transmissions could exhibit a greater resistance to interference than do analog TV transmissions. Therefore, DTV stations may be able to accept a lesser amount of protection from co-channel and adjacent channel land mobile and fixed stations than the 40 dB and 0 dB D/U ratios we propose for analog TV stations.

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[400] Section 90.309 of the Commission's Rules, 47 C.F.R. § 90.309, contains tables of separations based on a 40 dB D/U signal ratio. Smaller geographic separations are permitted for land mobile stations that use lower transmitter powers or antenna heights. The separations we propose in this Notice would assume the use of these tables to allow these smaller separations, where appropriate. The geographical separations described in Sections 90.307 through 90.309 of the Commission's Rules, 47 C.F.R. §§ 90.307-90.309, are also based on the assumption that the protected TV station is operating at one megawatt effective radiated power, using a 2,000 foot HAAT (height above average terrain) antenna. These operating parameters result in a Grade B contour of 64 dbuV/m at a distance of 55 miles from the TV transmitter. The Grade B contours are computed using the "F(50,50) curves" discussed in FCC Research Division Report No. R-6602, released Sept. 7, 1966.

[401] The adjacent channel separation requirement would also apply to protection of analog television operations on Channel 59.

[402] *See, e.g.*, Tables A, B, and E of Section 90.309 of the Commission's Rules, 47 C.F.R. § 90.309.

[403] Maximum facilities for TV stations operating in the UHF band are 5 megawatts effective radiated power, at an antenna HAAT of 610 meters (2,000 feet). *See* Section 73.614 of the Commission's Rules, 47 C.F.R. § 73.614.

We seek comment on the appropriate D/U ratios that should be applied for the protection of DTV stations.

236. We recognize that a table that permits operation at closer distances based on reduced power and antenna height may still be unnecessarily restrictive. For example, public safety systems could reduce interference through a variety of engineering techniques such as use of directional and down-tilt antennas. Also, certain modulation technologies may be employed to further reduce interference.[404] In addition, we note that there is a somewhat greater attenuation of signal in the 746-806 MHz band as compared with the 470-512 MHz band, and that it may be possible to take advantage of the fact that TV receivers are less sensitive to interfering signals in some parts of the TV channel than others.

237. In light of these considerations, we request comment on whether adopting uniform geographical spacings based on the use of separation tables would be appropriate, and if so, what separation distances should be used in such tables. We also invite comment as to whether we should establish different separation distances to protect TV operations from interference from fixed and mobile operations in the 746-806 MHz band. Further, we solicit views as to whether we should use different spacing requirements depending on the technology employed, location in the TV channel, or any other factor. Finally, we tentatively conclude that, given the variables, it would be appropriate to allow new licensees and TV licensees privately to negotiate shorter geographic separations than those we have proposed.

b. Other Approaches

238. We also request comment on whether approaches other than the use of geographic separation tables based on the assumption of a 55-mile reference Grade B contour should be employed for the protection of TV operations. For example, since TV broadcast stations are authorized with effective radiated power (ERP) levels up to 5 megawatts, at an antenna HAAT of 610 meters (2,000 feet),[405] we request comment on whether the size of the reference contour should be increased accordingly. We also seek comment on whether the use of tables based on a particular reference Grade B contour could unnecessarily inhibit innovative or case-specific solutions to potential interference problems.

[404] For example, TDMA- and CDMA-based systems might produce interference effects that differ from those of traditional analog FM systems. Also, due to the directive nature of fixed transmissions, fixed stations may produce interference effects that differ from those of land mobile stations.

[405] These parameters result in a Grade B contour distance of 107 kilometers (66.5 miles), calculated according to Sections 73.683 and 73.684 of the Commission's Rules, 47 C.F.R. §§ 73.683-73.684.

239. We therefore seek comment on whether protection criteria should instead be based on requiring that a predicted D/U signal ratio be met based on a TV licensee's authorized facilities, as proposed in the *UHF Sharing Proceeding*.[406] For example, we could require that public safety and other new service operations ensure that a D/U signal ratio of at least 40 dB is maintained at a TV licensee's Grade B contour to protect analog television operations. Thus, the fundamental emissions from co-channel operations outside the Grade B contour would be limited to a predicted field strength of 24 dBμV/m (= 64 dBμV/m - 40dB) at the Grade B contour.[407] For first adjacent analog TV channels, the fundamental emission of new fixed or mobile stations outside the Grade B contour would be limited to a predicted field strength of 64 dBμV/m (= 64 dBμV/m - 0 dB) at the Grade B contour. For DTV stations, appropriate co-channel and adjacent channel D/U ratios could apply to either the Grade B contour of the companion analog station or to the DTV station's noise-limited service area. We request comment on this alternative approach.

2. Other Issues

240. In the *DTV Proceeding*, we raised the possibility that, in negotiating among themselves for changes in allotments and assignments, TV licensees could include agreements for compensation. We propose to permit new licensees in this spectrum similarly to reach agreements with licensees of protected TV stations, including holders of construction permits, compensating them for converting to DTV transmission only before the end of the DTV transition period, accepting higher levels of interference than those allowed by the protection standards, or otherwise accommodating new licensees in these bands. We believe that these measures would benefit the public by accelerating the transition to DTV and clearing the 746-806 MHz band for public safety services.

V. PROCEDURAL MATTERS

A. Regulatory Flexibility Analyses

241. The Initial Regulatory Flexibility Analysis, as required by Section 603 of the Regulatory Flexibility Act,[408] is set forth in Appendix A. The Commission has prepared the Initial Regulatory Flexibility Analysis of the expected impact on small entities of the proposals suggested in this Notice. Written public comments are requested on the Initial Regulatory

[406] See note 398, *supra*.

[407] "Co-channel" in this context means that the authorized bandwidth of the protected TV station and the fixed or mobile stations overlap.

[408] 5 U.S.C. § 603.